



U.S. Department  
of Transportation

**Research and  
Special Programs  
Administration**

400 Seventh Street, S.W.  
Washington, D.C. 20590

JAN 17 2001

Mr. Richard C. Willard  
President  
Keehn Service Corporation  
99 North 11<sup>th</sup> Avenue  
Coatesville, Pennsylvania 19320

Ref. No. 00-0316

Dear Mr. Willard:

This responds to your letter, dated November 8, 2000, requesting clarification of the requirements in the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) for stretching MC 331 cargo tanks that are not currently equipped with manhole assemblies. Specifically, you ask about requirements for manhole assemblies on stretched MC 331 specification cargo tanks.

As your letter notes, § 180.413(d)(3) of the HMR requires all new material, new equipment, and equipment affected by modification, stretching, or rebarrelling to meet the requirements of the specification in effect at the time such work is performed. As defined in § 180.403, "stretching" includes any change in the length, width, or diameter of a cargo tank. Thus, the cargo tank itself is "equipment" that will be affected by stretching. As such, the stretched cargo tank must meet the requirements of the specification in effect at the time the stretching is performed. Accordingly, a stretched MC 331 cargo tank must be provided with a manhole assembly in conformance with § 178.337-6. As specified in § 178.337-6, a stretched MC 331 cargo tank constructed of NQT steel with a capacity of 3,500 gallons or less may be equipped with an inspection opening instead of a manhole assembly.

I hope this information is helpful. If you have further questions, please do not hesitate to contact this office.

Sincerely,

Thomas G. Allan  
Senior Transportation Regulations Specialist  
Office of Hazardous Materials Standards



000316

180.413



SERVICE CORPORATION

Gorsky  
§ 180.413  
Repairs

99 NORTH 11th AVENUE • COATESVILLE, PA 19320

PHONE: (610) 384-6851

FAX: (610) 380-0316

00-0316

November 8, 2000

Mr. Edward T. Mazzullo, Director  
Office of Hazardous Materials Standards  
United States Department of Transportation  
Research and Special Programs Administration  
400 Seventh Street, Southwest  
Washington, DC 20590

**RE: Request for Clarification-Stretching of Propane Bobtail Barrels**

Dear Mr. Mazzullo,

Keehn Service Corporation is currently involved with the fabrication, testing, and repair of MC-330 and 331 compressed gas equipment. We hold valid "U" and "R" certification stamps and are registered with the Department under CT number 0140.

There has been considerable interest generated in increasing the capacity of existing propane bobtail vessels to maximize payloads and save money versus the purchase of new vessels. In as much as we are registered with the Federal DOT and also have both ASME "U" and National Board "R" stamps, we looked into the possibility of doing this work for some of our customers. We looked at stretching both 72" ID and 80" ID vessels. Existing 72" vessels are usually limited to 3000 water gallon capacity, but smaller vessels of this diameter could be resized into 3000 gallon tanks. On the other hand, the 80" diameter tanks can be enlarged all the way to 3500 water gallons, or even beyond if so desired. The estimated cost for extending an existing 80" ID vessel to 3500 water gallons is about \$4900.00, excluding taxes and/or transportation charges that may apply. For comparison, the list price of a new 3499 water gallon propane bobtail tank, FOB the factory, is around \$13,000.

Part 180 of the DOT regulations clearly lists the various requirements for performing this work with the exception of one part, that being §180.413 (d) (3), which reads as follows:

(3) Except as provided in paragraph (d)(3)(v) in this section, all new material and equipment, and equipment affected by modification, stretching or rebarrelling must meet the requirements of the specification in effect at the time such work is performed, and must meet the applicable structural integrity requirements (§§178.337-3, 178.338-3, or §178.345-3 of this subchapter). The work must conform to the requirements of the applicable specification as follows:

Most, if not all of these smaller capacity vessels were manufactured before April 21, 1994 and were not equipped with manways, as is currently required in 49 CFR §178.337-6. Is it then correct to assume that because "all new material and equipment, and equipment affected by modification, stretching or rebarrelling must meet the requirements of the specification in effect at the time such work is performed" that manway assemblies should also be installed at the time of vessel stretching to match the current regulations for MC-331? We contend that manway assemblies should be installed.

The installation of a 16" ASA flanged manway assembly (typical in the industry) would account for \$1350.00 of the \$4900.00 total cost. By eliminating this requirement, the vessels could be stretched for about \$3550.00. The closing girth seam in the vessel was originally welded using a backing strip which remained in place after completion. This same technique would be used for the closing seam on the stretched vessel, eliminating the requirement for vessel entry (manway) to complete the final weldments. Radiographic examination can still be performed to satisfy the requirements of the National Board Inspection Code and the ASME Code Section VIII Division 1.

Please advise at your earliest convenience if you find our interpretation valid. I can be reached by telephone at the number shown above or by email at [rcwillard@aol.com](mailto:rcwillard@aol.com) for comments or questions. Thank you for your help in this matter.

Sincerely,

A handwritten signature in black ink, appearing to read 'Richard C. Willard', with a long horizontal flourish extending to the right.

Richard C. Willard  
President

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